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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/623,544	07/22/2003	Shinya Fujioka	108397-00106	4872
7590	06/15/2004		EXAMINER	
ARENT FOX KINTNER PLOTKIN & KAHN, PLLC SUITE 400 1050 CONNECTICUT AVENUE, N.W. WASHINGTON, DC 20036-5339			YOHA, CONNIE C	
			ART UNIT	PAPER NUMBER
			2818	

DATE MAILED: 06/15/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/623,544

Applicant(s)

FUJIOKA, SHINYA

Examiner

Connie C. Yoha

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-- Th MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 July 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 44-56 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) 44-56 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.



Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 7/03.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

1. This office acknowledges receipt of the following items from the Applicant:

Papers submitted under 35 U.S.C. 119(a)-(d) have been placed of record in the file.

Information Disclosure Statement (IDS) filed on 7/22/03 was considered.
2. Claims 1-43 are presented for examination.
3. Claims 1-43 are canceled.
4. Claims 44-56 are newly added.
5. Claims 44-56 are pending.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim 44-54, and 56 are rejected under 35 U.S.C. 102(b) as being anticipated by Brant et al, Pat. No. 5799200.

With regard to claim 52, Brant discloses a memory system comprising: a first memory including dynamic memory cells (fig. 2, 51) having a low power consumption mode (when memory system's power source is cut off) in which the dynamic memory cells do not retain data therein by prohibiting refresh operations (col. 5, line 27-29 discloses that when power from the primary source is not available, data are lost and no

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longer required continuously refreshed), and the first memory having a data terminal (fig. 2, 54); and a second memory including flash memory cells (fig. 2, 55), having a data terminal which is connected with the data terminal of the first memory (col. 5, line 29-34).

With regard to claim 53, Brant discloses wherein data stored in the dynamic memory cells in the first memory is transferred to the flash memory cells in the second memory before the first memory enters the low power consumption mode (col. 5, line 59-64).

With regard to claim 54, Brant discloses wherein data stored in the flash memory cells in the second memory is transferred to the dynamic memory cells in the first memory after the first memory exits the low power consumption mode (col. 9, line 52-63) (when power is restored, data from the flash memory is reloads to the DRAM).

Drafted as Method claim

As per claim 44-51 and 56 encompass the same scope of invention as to that of claim 52-54 except they are draft in method format instead of apparatus format. The claims are therefore rejected for the same reason as set forth above.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

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invention was made to a person having ordinary skill in the art to which said subject matter pertains.

Patentability shall not be negated by the manner in which the invention was made.

Claim 55 is rejected under 35 U.S.C. 103(a) as being unpatentable over Brant et al, Pat. No. 5799200 in view of Jha et al, Pat. No. 6407949.

With regard to claim 55, Brant discloses a processing systems having a first memory including dynamic memory cells (fig. 2, 51) having a low power consumption mode (when memory system's power source is cut off) in which the dynamic memory cells do not retain data therein by prohibiting refresh operations (col. 5, line 27-29 discloses that when power from the primary source is not available, data are lost and no longer required continuously refreshed), and the first memory having a data terminal (fig. 2, 54); and a second memory including flash memory cells (fig. 2, 55), having a data terminal which is connected with the data terminal of the first memory (col. 5, line 29-34), wherein data stored in the dynamic memory cells in the first memory is transferred to the flash memory cells in the second memory then the first memory enters the low power consumption mode upon shifting from the service state (on state) to the waiting state (off state) (col. 5, line 59-64), and wherein the first memory exits the low power consumption mode then data stored in the flash memory cells in the second memory is transferred to the dynamic memory cells in the first memory upon shifting from the waiting state to the service state (col. 9, line 52-63) (when power is restored, data from the flash memory is reloads to the DRAM). Brant, however, does not explicitly disclose that a processing systems having the above features are used in a cellular phone having a service state (on state) and a waiting state (off state). However, Jha discloses a mobile communication device such as cellular telephones having

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integrated embedded non-volatile (flash memory), which retain data after power is disconnect, and a volatile memory, which have large memory capacity and high operational speed (col. 1, line 13-46). Therefore, it would have been obvious for one having an ordinary skill in the art at the time the invention was made to incorporate the used of non-volatile and volatile memory device in mobile communication device such as cellular phone similar to Jha's into Brant's to provide a data processing system which can have the operational advantages of volatile memory devices having a relatively large memory capacity and high operational speed, but with the further advantage of non-volatile retention of data when power are disconnect or are in low consumption mode.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicants' disclosure. Takizawa (6198663), Shukuri et al (6614684) and Hsu et al (6670234) disclose a memory device having volatile and non-volatile memory cells.

9. When responding to the office action, Applicants' are advised to provide the examiner with the line numbers and page numbers in the application and/or references cited to assist the examiner to locate the appropriate paragraphs.

10. A shortened statutory period for response to this action is set to expire 3 (three) months and 0 (zero) day from the date of this letter. Failure to respond within the period for response will cause the application to become abandoned (see MPEP 710.02 (b)).

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to whose telephone number is (571) 272-1799. The

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examiner can normally be reached on Mon. - Fri. from 8:00 A.M. to 5:30 PM. The examiner's supervisor, David Nelms, can be reached at (571) 272-1787. The fax phone number for this Group is (703) 872-9306. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 305-0956.

12. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov> should you have questions on access to the Private Pair system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


C. Yoha

June 2004



Connie C. Yoha

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